

CLAIMS

What is claimed is:

1. A method of informing a user about a print error of a printer that performs a wireless printing operation using a wireless printer server, comprising:
 - (a) determining whether data to be printed are not received by the wireless printer server for more than a predetermined period during the wireless printing operation;
 - (b) requesting and receiving wireless communication information on the wireless printer server upon determining that the data to be printed are not received by the wireless printer server for more than the predetermined period;
 - (c) determining whether a link state or a link quality of a wireless communication is good by analyzing the received wireless communication information;
 - (d) generating print error information regarding the communication between the wireless printer server and a host when the link state or the link quality of the wireless communication is bad; and
 - (e) reporting the print error information to the user.
2. The method of claim 1, wherein (c) comprises:
 - (c1) determining whether the link state of the wireless communication is in an on state after (b); and
 - (c2) determining whether the link quality is in good condition to smoothly perform the wireless communication when the link state of the wireless communication is in the on state, wherein if the link state of the wireless communication is in an off state in (c1) or the link quality is in a bad condition to smoothly perform the wireless communication in (c2), (d) is performed.
3. The method of claim 1, wherein the link state information and the link quality information on the wireless communication are generated as the print error information in (d).
4. The method of claim 3, wherein date and time when the print error appeared, channel information, or identification address and Internet address of the host, which transfers the data to be printed, are further generated as the print error information in (d).
5. The method of claim 1, wherein the print error information is displayed on a

display screen of the printer or is printed in (e).

6. An apparatus for informing a user about a print error of a printer that performs a wireless printing operation using a wireless printer server, the apparatus comprising:

a data receiving detection unit to detect whether data to be printed are not received by the wireless printer server for more than a predetermined period during the wireless printing operation and to output a detection result;

a communication information request unit to request the wireless communication information on the wireless printer server in response to the detection result and to output a requested result;

a communication information analysis unit to analyze a link state or a link quality of the wireless communication by receiving the wireless communication information from the wireless printer server and to output an analysis result;

an error information generation unit to generate print error information based on the analysis result and to output the print error information; and

an error information informing unit to report the print error information to the user.

7. The apparatus of claim 6, wherein the communication information analysis unit comprises:

a link on detection unit to detect whether the link state of the wireless communication is in an on state and to output a detection result; and

a link quality measurement unit to measure the link quality with a sensitivity of communication between the wireless server printer and a host in response to the detection result and to output a measurement result,

wherein the error information generation unit generates the print error information based on the detection result or the measurement result.

8. The apparatus of claim 6, wherein the error information generation unit generates the link state information and the link quality information on the wireless communication as the print error information.

9. The apparatus of claim 8, wherein the error information generation unit further generates a print date and time when the print error appeared, channel information, or identification address and Internet address of the host, which transfers the data to be printed.

10. The apparatus of claim 6, wherein the error information informing unit displays the print error information on a display screen of the printer or prints the print error information.

11. A method, comprising:
determining, during a printing operation, whether data to be printed on a wireless network printer is not received for more than a predetermined period of time; and
generating and reporting print error information regarding a communication between a wireless network printer server and a computer when data is not received for more than the predetermined period of time.

12. The method of claim 11, further comprising:
determining whether a link quality and a link state of the communication are both good, wherein the print error information is not generated and transmitted when the link quality and the link state are both good.

13. The method of claim 12, wherein the link quality denotes a sensitivity of the communication, which can be measured using a signal-to-noise (S/N) ratio or an error rate.

14. A machine-readable medium that provides instructions, which, when executed by a machine, cause the machine to perform operations comprising:
determining, during a printing operation, whether data to be printed on a wireless network printer is not received for more than a predetermined period of time; and
generating and reporting print error information regarding a communication between a wireless network printer server and a computer when data is not received for more than the predetermined period of time.

15. The machine-readable medium of claim 14, wherein the instructions cause the machine to perform operations further comprising:
determining whether a link quality and a link state of the communication are both good, wherein the print error information is not generated and transmitted when the link quality and the link state are both good.

16. The machine-readable medium of claim 15, wherein the link quality denotes a

sensitivity of the communication, which can be measured using a signal-to-noise (S/N) ratio or an error rate.